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EXAMINER
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BASINGER, SHERMAN D

ART UNIT	PAPER NUMBER
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3617

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**GROUP 3600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/668,426  
Filing Date: September 23, 2003  
Appellant(s): CARVER ET AL.

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Brian K. Kolkowski  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed July 15, 2005.

A handwritten signature, possibly "A", located in the bottom right corner of the page.

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**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Summary of Claimed Subject Matter***

The summary of the claimed subject matter contained in the brief is correct.

**(5) *Grounds of Rejection to be Reviewed on Appeal***

The appellant's statement of the grounds of rejection to be reviewed on appeal in the brief is correct.

**(6) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(7) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1, 3-7 and 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Burg.

The steering nozzle is nozzle 45 of figure 11. The at least one groove is the lower one of grooves 46. This "the groove" has a surface area, and at least 75% of this surface area is located in the lower half of the interior surface area of the steering nozzle.

The nozzle comprises two grooves 46. Each groove 46 comprises at least two sides with a distinct angle between the two sides.

With regard to claims 11, 12, 13, 17, 18 and 19, because applicant has not defined within the claims the meaning of 0.001r, 1.5r, 0.002c, 0.4c, 0.01w and 3w, the grooves 46 of Burg are felt to anticipate these claims. Applicant has not given a meaning to "r", "c" and "w" within the claims.

With regard to claim 20, see Burg, column 7, lines 11-14. The addition of grooves 46 to the sides of the nozzle for steering would anticipate at least four grooves-two for trim and two for steering.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burg in view of Kobayashi.

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The boat of Burg does not comprise two or more propulsors. Kobayashi shows a boat with two propulsors. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide the boat of Burg with two propulsors both similar to the one propulsor of Burg.

Motivation to do so is to provide more power to the boat of Burg.

Claims 11-13 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burg.

The grooves of Burg do not have the length, width and spacing as defined in the above claims; however, to provide the grooves 46 of Burg with the claimed length, width and spacing as defined in the above claims would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Motivation to do so is to make a nozzle of a particular size having grooves of a particular width, length and spacing.

**(8) Response to Argument**

Appellant argues under the subtitle "Whether Claims 1, 3-7 and 9-20 are patentable under 35 U.S.C. §102(b) as being novel over U.S. Patent 6,193,571 (Burg)".  
Claims 1, 3-7 and 9-20 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,193,571 (Burg).

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. *W.L. Gore & Assocs. v. Garlock*, 721 F.2d 1540, 202 USPQ 202 (Fed. Cir. 1983). It is not enough that the prior art reference disclose all of the claimed elements in isolation, but rather anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). Further, anticipation requires that the prior art reference must be enabling, thus placing the

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allegedly disclosed matter in the possession of the public. *Akzo N.V. v. U.S. Int'l Trade Comm'n*, 808 F.2d 1471, 1 USPQ 2d. 1241 (Fed. Cir. 1986).

In rebuttal, Burg discloses each and every element of the claimed invention.

Burg discloses a watercraft comprising:

a hull (column 3, line 60, boat keel 58);

an engine (inherently present and discussed in column 1, line 7), and

a propulsor (figure 7), the propulsor comprising an impeller 34, a water intake 53, and a steering nozzle (45, figure 11; column 7, lines 10-15)

the steering nozzle having an inlet and an exit, and an interior surface and an exterior surface, the steering nozzle further comprising at least one groove (lower groove 46 of figure 11) in the interior surface

beginning near or at the exit and extending a distance along the interior surface toward the inlet.

Burg also discloses that the steering nozzle comprises at least

two grooves (figure 11), that the lower groove 46 of figure 11 has a surface area, the interior surface of the steering nozzle has a total interior surface area, and when the

steering nozzle is sectioned at least about 75% of the groove area is located in any contiguous half (the lower half of the steering nozzle) of the total interior surface area of

the steering nozzle, and that the groove 46 comprises at least two sides with a distinct angle (90 degrees) between the two sides.

Burg also discloses a watercraft comprising:

a hull (column 3, line 60);

an engine (discussed in column 1, line 7); and

a propulsor (figure 7), the propulsor comprising an impeller 34, a water intake 53, and a steering nozzle 45 of figure 11,

the steering nozzle having an inlet and an exit, and an interior surface having an interior surface area and an exterior surface, the steering nozzle further comprising at least one groove (bottom groove 46 of figure 11) in the interior surface beginning near or at the exit and extending a distance along

the interior surface toward the inlet, the at least one groove having a groove area

wherein

when the steering nozzle is sectioned at least about 75% of the groove area is located in

any contiguous half (the lower half) of the total interior surface area of the steering nozzle.

Burg also discloses that the steering nozzle comprises at least

two grooves 46, and that the groove in the steering nozzle

comprises at least two sides with a distinct angle (90 degrees) between the two sides.

Burg also discloses a steering nozzle 45 for a waterjet propulsion system (figure 7)

comprising:



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an inlet and an exit (see figures 7 and 11); an interior surface and an exterior surface (see figure 11); and at least one groove 46

beginning at or near the exit and extending a distance along the interior surface toward the inlet.

Burg also discloses that the nozzle 45 comprises at least two grooves 46, that the groove comprises at least two sides with a distinct angle (90 degrees) between the two sides.

With regard to claims 11, 12, 13, 17, 18 and 19, because applicant has not defined within the claims the meaning of 0.001r, 1.5r, 0.002c, 0.4c, 0.01w and 3w, the grooves 46 of Burg are felt to anticipate these claims. Applicant has not given a meaning to "r", "c" and "w" within the claims.

With regard to claim 20, see Burg, column 7, lines 11-14. The addition of grooves 46 to the sides of the nozzle for steering would anticipate at least four grooves-two for trim and two for steering.

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Applicant has not pointed out why the disclosure of Burg is not enabling. From a review of the Burg patent, the disclosure appears to be enabling.

Appellant argues under the subtitle "Whether Claims 1, 3-7 and 9-20 are patentable under 35 U.S.C. §102(b) as being novel over U.S. Patent 6,193,571 (Burg)":

The Applicants respectfully submit that the Examiner has not established a prima-facie case of anticipation.

Burg does not describe a watercraft comprising a hull, an engine and a propulsor, but rather specifically addresses only a propulsor. The Applicant's have raised this issue of these missing elements from Claims 1-13, which the Examiner is apparently unwilling to address in some fashion.

In rebuttal, the hull is disclosed in column 3, line 60 of Burg, the engine is discussed in column 1, line 7 and the propulsor with the steering nozzle 45 is shown in figure 7.

Appellant argues: The Examiner points to the nozzle in Figure 11 of the Burg reference as anticipating the steering nozzle element of the Appellant's invention. In addition, the nozzle in Burg and the claimed steering nozzle are not the same.

With respect to the propulsor in independent Claims 1 and 7, Burg does not provide a steering nozzle as claimed by the Applicants, but only a non-movable, static discharge or convergent nozzle, which does not operate to steer the watercraft. Furthermore, the

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Examiner even admits that the grooves themselves in the convergent nozzle of Burg are used as a recess for the movement of trim elements (and therefore the grooves are not directly used as a means to control fluid flow).

In rebuttal to the above arguments, the claims rejected as being anticipated by Burg define no structure not disclosed by Burg. Claims 1, 7 and 14 define a steering nozzle, but do not define that the nozzle is movable. In column 7, Burg discloses that "it is possible to also use such control flap like elements on either side of a discharge nozzle to act as steering means". When control flap like elements 47 and 57 are provided on either side of the nozzle 45 of figure 11, they act as a steering means. Because the flaps are apart of the nozzle, when the flap like elements act as a steering means, the nozzle acts like a steering means, and is a steering nozzle.

The arguments concerning the nozzle controlling fluid flow bring up a point not even claimed. The claims define the specific structure of the steering nozzle, but do not define that or how the nozzle controls fluid flow. Further, it is clear that the nozzle of Burg controls fluid flow through the flaps whether the flaps are used to control trim alone, or trim and steering. The flaps and the therefore the nozzle control fluid flow by directing the fluid discharge in a particular direction.

Appellant argues: Burg in fact teaches away from using a steering nozzle. In column 7, lines 6-11 Burg teaches that "Major advantages of this

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inventive approach nozzle [the nozzle disclosed in Burg] over a fully articulated [or steering] nozzle [the nozzle claimed by the Applicants] are that: 1) construction is very simple, 2) control system and actuators are less complicated, and 3) there is little or no back flow leakage. The back flow leakage associated with an articulated [or steering] nozzle results in a loss of efficiency." Burg instead suggests the use of a control flap or rudder element to direct the discharge of the convergent nozzle, or steer-not a steering nozzle [or fully articulated nozzle] as claimed.

In rebuttal, appellant does not claim an articulated nozzle. Appellant only claims a steering nozzle. Further, the passage in Burg referenced by appellant never refers to a steering nozzle. This passage only references an articulated nozzle. Appellant appears to be pushing the position that steering nozzles are only articulated nozzles. This position is incorrect as a steering nozzle does not have to be articulated. Burg uses flaps similar to 47 and 57 of figure 11 to make the nozzle in figure 11 a nozzle used for steering, or a steering nozzle. This supports the position that a steering nozzle need not be articulated.

Appellant argues under the subtitle "Whether Claims 14-20 are patentable under 35 U.S.C. §102(b) as being novel over U.S. Patent 6,193,571 (Burg)": The Applicants respectfully submit that the Examiner has not established a prima facie case of anticipation.

The Examiner points to the nozzle in Figure 11 of the Burg reference as anticipating the steering nozzle element of the Appellant's invention.

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In addition, the nozzle in Burg and the Claimed steering nozzle are not the same.

With respect to the propulsor in independent Claim 14, Burg does not provide a steering nozzle as claimed by the Applicants, but only a non-movable, static discharge or convergent nozzle, which does not operate to steer the watercraft. Furthermore, the Examiner even admits that the grooves themselves in the convergent nozzle of Burg are used as a recess for the movement of trim elements (and therefore the grooves are not directly used as a means to control fluid flow). Burg in fact teaches away from using a steering nozzle. In column 7, lines 6-11 Burg teaches that "Major advantages of this inventive approach nozzle [the nozzle disclosed in Burg] over a fully articulated [or steering] nozzle [the nozzle claimed by the Applicants] are that: 1) construction is very simple, 2) control system and actuators are less complicated, and 3) there is little or no back flow leakage. The back flow leakage associated with an articulated [or steering] nozzle results in a loss of efficiency." Burg instead suggests the use of a control flap or rudder element to direct the discharge of the convergent nozzle or steer, not a steering nozzle (or fully articulated nozzle) as claimed.

Again, in rebuttal, appellant does not claim an articulated nozzle. Appellant only claims a steering nozzle. Further, the passage in Burg referenced by appellant never refers to a steering nozzle. This passage only references an articulated nozzle.

Appellant appears to be pushing the position that by claiming a steering nozzle the claimed steering nozzle can only consist of an articulated nozzle. This position is incorrect as a steering nozzle does not have to be articulated. Burg uses flaps similar to 47 and 57 of figure 11 to make the nozzle in figure 11 a nozzle used for steering, or a

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steering nozzle. This supports the position that a steering nozzle need not be articulated.

*Appellants argue under the subtitle "Whether Claims 11-13 and 17-19 are patentable under 37 U.S.C. §102(b) as being novel over U.S. Patent 6,193,571 (Burg)":*

The Applicants respectfully submit that the Examiner has not established a prima facie case of anticipation.

The Examiner stated that with respect to Claims 11-13 and 17-19 that because the Applicant has not defined within the claims the meaning of 0.001r, 1.5r, 0.002c, 0.4c, 0.01w and 3w that the grooves of Burg are felt to anticipate these claims.

It is not clear what argument the Examiner was intending to make with respect to these claims. A claim is not required to provide a written description of the invention, but rather the specification is required to describe the invention so that "persons of ordinary skill in the art will recognize from the disclosure" that appellants invention contain those limitations. In re Wertheim, 541 F.2d 257, 191 USPQ 90 (C.C.P.A. 1976).

The Applicants defined the meaning of the terms 0.001r, 1.5r, 0.002c, 0.4c, 0.01w and 3w in the description of the specification, see page 10, line 25 to page 11, line 27.

The Applicants submit if the terms are specifically defined in the specification they do not need to be defined in the claims. Further, the Applicants respectfully submit that Burg does not provide a steering nozzle with at least one groove having these particular characteristics.

In rebuttal, during examination the claims are to be given their broadest reasonable interpretation. As such, the dictionary definition of r is the 18th letter of the alphabet. The same would be true for the letters c and w. As such, because the claims in question do not define the meaning of r, c and w any differently than what can be found in the dictionary, then the claims in question do not define any dimension of the spacing between the grooves, the length of the grooves and the width of the grooves not anticipated by grooves 46 of figure 11 of Burg.

Appellant argues under the subtitle "Whether Claim 20 is patentable under 35 U.S.C. §102(b) as being novel over U.S. Patent 6,193,571 (Burg)": The Applicants respectfully submit that the Examiner has not established a prima facie case of anticipation.

The Examiner stated that with respect to Claim 20 that the addition of grooves to the sides of the nozzle for steering would anticipate at least four grooves - two for trim and two for steering.

Column 7, lines 11-14 of Burg doesn't teach "the addition of grooves 46 to the sides of the [discharge] nozzle". The Applicants respectfully submit nowhere in Burg is it taught to provide a steering nozzle comprising at least four grooves nor any other type of nozzle with at least four grooves for that matter. Burg does state in column 7, lines 11-15 that "it is possible to also use control flap like elements on either side of a discharge (convergent) nozzle and/or to use a rudder element disposed in the discharge jet". The Applicants submit that the words either side, apparently teaches putting the

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flaps on the outside of the convergent nozzle of Burg, while in apparently teaches putting a rudder element inside the convergent nozzle.

In rebuttal, Burg discloses in column 7, lines 11-14 that "it is possible to also use such control flap like elements on either side of a discharge nozzle to act as steering means". In column 7, lines 4 and 5, Burg discloses trim control elements 47 and 57. Trim control elements 47 and 57, in figure 11, are shown as being placed in grooves 46 of nozzle 45. In column 7, lines 11-14 reference to "such control flap like elements" is reference to control elements 47 and 57. If control elements 47 and 57, for trim, are used within the nozzle in grooves 46, why would they for steering be placed outside the nozzle as urged by appellant? Control elements 47 and 57 are pivoted within the nozzle and grooves 46 to control trim. They would likewise be pivoted within grooves within the nozzle to control steering. The flaps control trim by pivoting to direct the flow emerging from the nozzle in a particular direction. To control steering such flaps would be pivoted within grooves to direct flow emerging from the nozzle.

Appellant argues under the subtitle "Whether Claims 2 and 8 are patentable under 35 U.S.C. §103 as being nonobvious over U.S. Patent 6,193,571 (Burg) in view of U.S. Patent 5, 603,644 (Kobayashi)": The Examiner has not established a prima facie case of obviousness. Neither Burg nor Kobayashi describe or teach of a steering nozzle with the features of the claimed invention.



In rebuttal, Burg discloses in figure 11 a nozzle which can be used for steering in the manner described in column 7, lines 11-14, such nozzle anticipating the invention claimed in claims 1, 3-7 and 9-20.

Appellant argues: In addition, the Examiner has not pointed out or given any reason, suggestion, or motivation from the references cited as a whole for the person of ordinary skill in the art to have combined or modified the references.

In rebuttal, the examiner gave motivation to modify Burg to have two or more propulsors. The boat of Burg does not comprise two or more propulsors. Kobayashi shows a boat with two propulsors. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to provide the boat of Burg with two propulsors both similar to the one propulsor of Burg. **Motivation to do so is to provide more power to the boat of Burg.**

Appellant argues: Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination. In re Geiger, 815 F.2d 686, 2 USPQ 2d 1276 (Fed. Cir. 1987). In addition, the suggestion or motivation must have existed before the date of the invention. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. The Examiner cannot use hindsight

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reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. In *Re Fritch*, 972 F.2d 1260, 23 USPQ 2d 1780 (Fed. Cir. 1992).

In rebuttal, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The knowledge that was within the level of ordinary skill in the art at the time of the claimed invention was the use of two propulsors in a watercraft. Kobayashi et al issued February 18, 1997. Thus, what is taught by Kobayashi et al was within the knowledge of one having ordinary skill in the art at the time of appellant's invention. Kobayashi et al teaches the use of two propulsion units 42 on a single watercraft. The use of two propulsors on a watercraft by Kobayashi et al would fairly suggest to one having ordinary skill in the art, the use of two propulsors similar to that of Burg on the Burg watercraft. Motivation to modify a reference need not be found in the references themselves, but can be found in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the knowledge

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available to one having ordinary skill in the art is that the use of two propulsors on a single watercraft will provide more power to the boat.

Appellant argues: The Examiner has stated that at the time the invention was made a person of ordinary skill in the art to which the subject matter pertains would have provided the boat in Burg with two propulsors both similar to the one propulsor of Burg. The Applicants requested since the Examiner could not point to a reason, suggestion, or motivation in the references for such combination that it must have been in the personal knowledge of the Examiner, and requested that the Examiner provide an affidavit detailing as specifically as possible such reason, suggestion or motivation as per 37 CFR 1.104 (d)(2).

Section 1.104 states in part that "When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant or other persons."

This is further supported by *In re Pardo*, 684 F.2d 912, 214 USPQ 673, 677 (CCPA 1982) where the court stated "assertions of technical facts in areas of esoteric technology must always be supported by citation to some reference work recognized as standard in pertinent art and the appellant be given, in the Patent Office, the opportunity to challenge the correctness of the assertion or the notoriety or repute of the cited reference.... Allegations concerning specific "knowledge" of the prior art, which might be

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peculiar to a particular art should also be supported and the appellant similarly given the opportunity to make a challenge."

The Examiner was apparently unwilling to address this request by the Applicants, and therefore the Applicants were not given the opportunity to challenge the correctness of the Examiner's assertion of the motivation of one skilled in the art prior to the claimed invention.

In rebuttal, 37 CFR 1.104(d)(2) refers to a rejection based on personal knowledge of an employee of the office. The rejection in question is not a rejection based on personal knowledge of the examiner.

It is pointed out that there are three possible sources for a motivation to combine references. They are the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. (MPEP 2143.01)

The rejection in question provides two of the three sources. The prior art teaches that a watercraft can be provided with two propulsors. The knowledge of persons of ordinary skill in the art is that by providing two propulsors to a watercraft more power can be given to the watercraft.

It is further noted that obviousness can be established by combining or modifying the teachings of prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. (MPEP 2143.01). In this instance, the references themselves both suggest and teach providing a watercraft with two propulsors. Kobayashi et al makes such a suggestion

and such a teaching. Motivation is found in the knowledge of those having ordinary skill in the art. The knowledge is that in providing two propulsors to a watercraft, the power available to a watercraft is increased.

Appellant argues under the subtitle "Whether Claims 11-13 and 17-20 are patentable under 35 U.S.C. §103 as being obvious over U.S. Patent 6,193,571 (Burg)":

The Examiner has not established a prima facie case of obviousness. Burg does not describe or teach of a steering nozzle with the features of the claimed invention.

The Examiner has stated that at the time the invention was made a person of ordinary skill in the art to which the subject matter pertains would have provided grooves of Burg with the claimed length, width and spacing as defined in the Applicant's claims.

The Applicants requested that because it was clear this motivation was in the personal knowledge of the Examiner, and that the Examiner provide an affidavit detailing as specifically as possible such reason, suggestion or motivation as per 37 CFR j 1.104 (d) (2).

Again, Section 1.104 states in part that "When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant or other persons."

This is further supported by *In re Pardo*, 684 F.2d 912, 214 USPQ 673, 677 (CCPA 1982) where the court stated "assertions of technical facts in areas of esoteric technology must always be supported by citation to some reference work recognized as standard in pertinent art and the appellant be given, in the Patent Office, the opportunity to challenge the correctness of the assertion or the notoriety or repute of the cited reference....Allegations concerning specific "knowledge" of the prior art, which might be peculiar to a particular art should also be supported and the appellant similarly given the opportunity to make a challenge."

The Examiner was apparently unwilling to address this request by the Applicants, and therefore the Applicants were not given the opportunity to challenge the correctness of the Examiner's assertion of the motivation of one skilled in the art prior to the claimed invention.

In rebuttal, the rejection of claims 11-13 and 17-20 as being unpatentable over Burg is not a rejection based on personal knowledge of the examiner. Rule 37 CFR 1.104(d)(2) refers to a rejection based on personal knowledge of an employee of the office.

The rejection of claims 11-13 and 17-20 as being unpatentable over Burg follows *Graham v. John Deere Co.* In making the rejection the four factual inquiries enunciated in *Graham v. John Deere Co.* were followed. The scope and contents of the prior art was determined; the differences between the prior art and the claims in issue was ascertained, the level of one having ordinary skill in the art was resolved; and any evidence of secondary considerations was evaluated.

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The scope and contents of Burg was determined. Burg discloses a steering nozzle for a watercraft propulsor in figure 11 which has two grooves 46, one at the top and one at the bottom.

The difference between Burg and claims 11-13 and 17-20 is the defining of the groove as: having a length and

the length of the groove being between from about  $0.001r$  to about  $1.5r$  where  $r$  is the internal radius or the largest internal width of the steering nozzle; having a width and the width of the groove at its widest point being between from about  $0.002c$  to about  $0.4c$  where  $c$  is nozzle inner circumference; and having at least two grooves, and the spacing between the at least two grooves being between from about  $0.01w$  to about  $3w$  at their nearest point where  $w$  is the maximum width of the groove.

The level of ordinary skill in the art is the ability of one having ordinary skill in the art to make the nozzle in figure 11 of a particular size, the width and length of the groove 46 of a particular dimension and the spacing of the upper and lower grooves of a particular dimension.

Finally, because no evidence, such as test results showing that the claimed dimensions provide an improved result, has been provided, evaluation of such was not made, but would have been if it had been provided.

It is also pointed out that the length of the groove 46 shown in Burg appears to very nearly be between  $0.001r$  and  $1.5r$  where  $r$  is the internal radius or the largest internal width of the steering nozzle, that the width of the groove 46 of Burg appears to very




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nearly  $0.002c$  to about  $0.4c$  where  $c$  is the nozzle inner circumference, and that the spacing between the upper and lower grooves 46 of Burg in figure 11 appears to be very nearly  $0.01w$  and about  $3w$  where  $w$  is the maximum width of the groove. Thus to modify only very slightly the grooves 46 of Burg to have a length, width and spacing as claimed would not require a significant change to the dimensions suggested by figure 11 of Burg. One having ordinary skill in the art could easily do so without effecting the performance of the nozzle. Again, motivation to do so is to have a nozzle with grooves of a particular size to obtain a particular performance.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
Sherman D. Basinger  
Primary Examiner  
Art Unit 3617

8/3/05

sdb

August 3, 2005

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